

M/023/0080
Wayne
5976

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E Mail
3/12/2014

Applied Minerals

Revised March 11, 2014

Dragon Mine M/002/0080

Bonding Calculations

Prepared by: Oren Gatten
North American Exploration, Inc.

Direct Costs

Subtotal Demolition and Removal	\$79,148.40
Subtotal Backfilling and Grading	\$30,479.09
Subtotal Revegetation	<u>\$40,600.00</u>
<u>Subtotal Direct Costs</u>	<u>\$150,227.49</u>

Indirect Costs

Mob/Demob	\$15,023.00	10.0%
Contingency	\$7,511.00	5.0%
Engineering Redesign	\$3,756.00	2.5%
Main Office Expense	\$10,215.00	6.8%
Project Management Fee	\$3,756.00	2.5%
Subtotal Indirect Costs	<u>\$40,261.00</u>	

Total Cost 2014 **\$190,488.49**

Number of Years	3
Escalation Factor	0.015

Reclamation Cost Escalated	\$199,190
Average Cost per Acre Disturbed	\$4,980

Bond Amount (Rounded to nearest \$1,000)

2017 Dollars **\$199,000**

RECLAMATION SURETY ESTIMATE

Mine Operator: Applied Minerals, Inc.

Mine Name: Dragon Mine

DOGM file Number: M/002/0080

Prepared by: Oren Gatten

North American Exploration, Inc

Reclamation Details:

Reclamation activities included in this worksheet and limited to facilities and disturbed areas associated with the addition of the Hosakawa Mill.

This estimate includes the cost to remove all equipment, chemicals and debris from the Hosakawa Mill. Compacted areas will be ripped to 24". Growth Medium and seeding for mill site is included in current

JUAB COUNTY, UTAH

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file: MINE-BOND.xls

	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell	Quantity	Unit	Cost
Demolition and Removal																				
PORTABLE OFFICE TRAILERS																				
1	Dryroom / Lunchroom 12'x56' Trailer																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
3	Superintendent Trailer 12'x56'																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
7	Core/Lab Trailer 8'x43'																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
8	Map/Lab Trailer 8'x33'																			
	Delivery to Payson, Utah 31 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
9	Carpentry Conex 8.5'x28'																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
10	Core Storage Trailer 8'x40'																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160
14	Core Storage Conex 8'x40'																			
	Delivery to Payson, Utah 50 Mile Round Trip	Transport Trailer	01 52 13 20 0800	\$12.10	Mile													31	Mile	\$375
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate, Large Load	\$160.00	Load													1	Load	\$160

STEEL OPEN BAY BUILDINGS																						
5 Mill Building 50'x60'x15'																						
Mill Building	Structure Demolition, Large Projects, Steel	02 41 16 13 0020	\$0.36	CF	50	60	15							45,000						45,000	CF	\$16,200
Deduct for No Interior Walls	For Buildings with No Interior Walls, 50% deduction.	02 41 16 13 5000	(\$0.18)	CF	50	60	15							45,000						45,000	CF	(\$8,100)
Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson, 50 mile Round Trip. (No Disposal Fee for Steel)	31 23 23 20 3286	\$15.30	CY										120 CY						120 CY		\$1,836
Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6	\$1,877.32	Day	50	60	0.5							56 CY						0.5 Day		\$939
	Load / Haul to Payson, 50 mile Round Trip.	31 23 23 20 3286	\$15.30	CY	50	60	0.5							56 CY						56 CY		\$857
	Disposal at Payson Landfill, 10 Wheeled Vehicle, \$80/Load	Landfill Rate	\$80.00	Load	50	60	0.5							56 CY						7 Load		\$560
13 Compressor Building 33'x43'																						
Compressor building	Structure Demolition, Large Projects, Steel	02 41 16 13 0020	\$0.36	CF	33	43	12							17,028						17,028	CF	\$6,130
Deduct for No Interior Walls	For Buildings with No Interior Walls, 50% deduction.	02 41 16 13 5000	(\$0.18)	CF	33	43	12							17,028						17,028	CF	(\$3,065)
Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson, 50 mile Round Trip. (No Disposal Fee for Steel)	31 23 23 20 3286	\$15.30	CY										5 CY						5 CY		\$77
Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6	\$1,877.32	Day	33	43	0.5							27 CY						0.5 Day		\$939
	Load / Haul to Payson, 50 mile Round Trip.	31 23 23 20 3286	\$15.30	CY	33	43	0.5							27 CY						27 CY		\$413
	Disposal at Payson Landfill, 10 Wheeled Vehicle, \$80/Load	Landfill Rate	\$80.00	Load	33	43	0.5							27 CY						3 Load		\$240
15 Small Metal Office 10'x25'x10'																						
Small metal Office	Structure Demolition, Large Projects, Steel	02 41 16 13 0020	\$0.36	CF	10	25	10							2,500						2,500	CF	\$900
Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson, 50 mile Round Trip. (No Disposal Fee for Steel)	31 23 23 20 3286	\$15.30	CY										8 CY						16 CY		\$245
Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6	\$1,877.32	Day	10	25	0.5							5 CY						0.5 Day		\$939
	Load / Haul to Payson, 50 mile Round Trip.	31 23 23 20 3286	\$15.30	CY	10	25	0.5							5 CY						5 CY		\$77
	Disposal at Payson Landfill, 10 Wheeled Vehicle, \$80/Load	Landfill Rate	\$80.00	Load	10	25	0.5							5 CY						1 Load		\$80

WOOD FRAME BUILDINGS																						
2	Dry Room Office Addition 32'x14'x10'																					
	Dry Room office Addition	Structure Demolotion, Large Projects, Wood	02	41	16	13	0700	\$0.39	CF		32	14	10							4,480		
	Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY											7 CY		
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		32	14	0.33							6 CY		
	Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6					\$1,877.32	Day		32	14	0.33							6 CY		
		Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY		32	14	0.33							6 CY		
		Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		32	14	0.33							6 CY		
4	Mine Plumbing Building 8'x6'																					
	Mine Plumbing Building	Structure Demolotion, Large Projects, Wood	02	41	16	13	0700	\$0.39	CF		8	6	10							480		
	Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY											2 CY		
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		8	6	0.33							0.5 CY		
	Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6					\$1,877.32	Day		8	6	0.33							0.5 CY		
		Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY		8	6	0.33							0.5 CY		
		Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		8	6	0.33							0.5 CY		
12	Generator Building 13.5'x24'x10'																					
	Generator Building	Structure Demolotion, Large Projects, Wood	02	41	16	13	0700	\$0.39	CF		14	24	10							3,240		
	Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY											13 CY		
	Disposal of Material	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		14	24	0.33							4 CY		
	Concrete Slab Demolition	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6					\$1,877.32	Day		14	24	0.33							4 CY		
		Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286	\$15.30	CY		14	24	0.33							4 CY		
		Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate					\$80.00	Load		14	24	0.33							4 CY		
HEAD FRAME DEMOLITION																						
PORTAL HEAD FRAME																						
	Demolish and Remove Head Frame	Demolition and Disposal	DOGM Recommendation					\$2,000.00	Ea												1 Ea	\$2,000

HOSAKAWA MILL ADDITION 2014																								
16	Hosakawa Mill Building																							
	Hosakawa Mill Area - Steel building, 35'x65'x40'	Structure Demolotion, Large Projects, Steel	02	41	16	13	0020		\$0.36	CF		30	60	35			63,000					63,000	CF	\$22,680
	Deduct for No Interior Walls	For Buildings with No Interior Walls, 50% deduction.	02	41	16	13	5000		(\$0.18)	CF		30	60	35			63,000					63,000	CF	(\$11,340)
	Office / Warehouse Area	Structure Demolotion, Large Projects, Steel	02	41	16	13	0020		\$0.36	CF		55	60	20			66,000					66,000	CF	\$23,760
	Deduct for No Interior Walls in Warehouse Section 35'x65'x20'.	For Buildings with No Interior Walls, 50% deduction.	02	41	16	13	5000		(\$0.18)	CF		35	60	20			42,000					42,000	CF	(\$7,560)
	Building Debris - Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286		\$15.30	CY							80 CY					80 CY		\$1,224
	Building Debris - Disposal	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate						\$80.00	Load							80 CY					10 Load		\$800
	Concrete Slab Interior	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6						\$1,877.32	Day		60	85	0.5			95 CY					1 Day		\$1,877
		Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286		\$15.30	CY		60	85	0.5			95 CY					95 CY		\$1,454
		Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate						\$80.00	Load		60	85	0.5			95 CY					12 Load		\$960
	Concrete Slab Exterior	Demo Slab on Grade Using Backhoe and Crew B-6.	Crew B-6						\$1,877.32	Day		60	40	0.5			45 CY					1 Day		\$1,877
		Load / Haul to Payson. 50 mile Round Trip.	31	23	23	20	3286		\$15.30	CY		60	40	0.5			45 CY					45 CY		\$689
		Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate						\$80.00	Load		60	40	0.5			45 CY					5 Load		\$400

1.2 Meter Hosakawa Mill																					
	Demolition	Equipment Operator	Crew B6, With 2 Laborers		\$71.35	Hr												16	Hr	\$1,142	
		Front End Loader W.M. 1.5 CY			\$401.72	Day												2.0	Day	\$803	
		2 Laborers			\$56.55	HR													16	HR	\$905
	Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31 23 23 20 3286		\$15.30	CY												15	CY	\$230	
	Disposal	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate		\$80.00	Load												2	Load	\$160	
Feed and Product Silos																					
	Demolition	Equipment Operator	Crew B6, With 2 Laborers		\$71.35	Hr												8	Hr	\$571	
		Front End Loader W.M. 1.5 CY			\$401.72	Day													1.0	Day	\$402
		2 Laborers			\$56.55	HR													8	HR	\$452
	Load and Haul to Payson Landfill	Load / Haul to Payson. 50 mile Round Trip.	31 23 23 20 3286		\$15.30	CY												12	CY	\$184	
	Disposal	Disposal at Payson Landfill. 10 Wheeled Vehicle, \$80/Load	Landfill Rate		\$80.00	Load												2	Load	\$160	
Propane Tanks																					
	Propane Tank Demolition	Demolition fee to remove 800 gallon propane tank. Cost estimate from current supplier, Suburban Propane. Contact Shane Fern (801) 972-6674	Tank Removal (800 Gallon) by Suburban Propane		\$250.00	Ea												16	Ea	\$4,000	
	Propane Disposal Fee	Cost to remove and dispose of propane at a hazardous waste facility by Suburban Propane. Contact Shane Fern (801) 972-6674.	Propane Recovery, Transportation and Hazardous Waste Disposal by Contractor (Suburban Propane) Estimate includes 10% fill rate on all tanks.		\$1.00	Gal												1,280	Gal	\$1,280	

Total Demolition and Disposal \$79,148

RECLAMATION SURETY ESTIMATE

 Mine Operator: **Applied Minerals, Inc.**

 Mine Name: **Dragon Mine**

 DOGM file Number: **M/002/0080**

JUAB COUNTY, UTAH

 Prepared by: **Oren Gatten**

North American Exploration, Inc

Last Revision

March 11, 2014

file: MINE-BOND.xls

	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Acres	Volume	Weight	Density	Time	Number	Unit	Swe II	Quantity	Unit	Cost
Earth Work																				
Backfilling and Grading																				
Site Reclamation																				
	Facilities Area - Debris Removal	Load/Haul	31 23 23 20 3286	\$15.30	B.C.Y.										55	B.C.Y.		55	B.C.Y.	\$842
	Closure of Portal	Gate, Labor and materials		\$2,000.00	Ea										1	Ea		1	Ea	\$2,000
	Shaft Reclamation	Backfill and Plug existing Shaft with Concrete (Use DOGM Cost Estimate)		\$5,000.00	Ea										1	Ea		1	Ea	\$5,000
	Rip 24" Beneath Building Footprints and Compacted Facility Areas (2 Acres)	Ripping, Till, Medium Hard, 300Hp Dozer, Adverse Conditions	31 23 16 32 2830	\$0.54	B.C.Y.										6,453	B.C.Y.		6,453	B.C.Y.	\$3,485
	Rip 12" Along Contours / Grade Dump Bases (13.3 Acres)	Ripping, Till, Medium Hard, 300Hp Dozer, Adverse	31 23 16 32 2830	\$0.54	B.C.Y.										21,457	B.C.Y.		21,457	B.C.Y.	\$11,587
	Rip 24" Along Contours / Grade Access Roads (4.2 Acres)	Ripping, Till, Medium Hard, 300Hp Dozer, Adverse	31 23 16 32 2830	\$0.54	B.C.Y.										13,552	B.C.Y.		13,552	B.C.Y.	\$7,318
Hosakawa Mill Area																				
	Rip / Grade Compacted area below Hokusawa Mill (24" depth)	Ripping, Till & clay, 300HP Dozer & Adverse Conditions	31 23 16 32 2800	\$0.42	B.C.Y.	35	65	2			169				169	B.C.Y.		169	B.C.Y.	\$71
	Rip / Grade Compacted area below Office and Warehouse	Ripping, Till & clay, 300HP Dozer & Adverse Conditions	31 23 16 32 2800	\$0.42	B.C.Y.	30	65	2			144				144	B.C.Y.		144	B.C.Y.	\$61
		Ripping, Till & clay, 300HP Dozer & Adverse Conditions	31 23 16 32 2800	\$0.42	B.C.Y.	75	50	2			278				278	B.C.Y.		278	B.C.Y.	\$117

Total Earth Work \$30,479

RECLAMATION SURETY ESTIMATEMine Operator: **Applied Minerals, Inc.**Mine Name: **Dragon Mine**DOGM file Number: **M/002/0080** JUAB COUNTY, UTAH

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	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell	Quantity	Unit	Cost
Revegetation - Amendments and Reseeding																				
	DOGM Revegetation	\$1,000/Acre Standard		\$1,000.00	Acre										40	Acre		40	Acre	\$40,000
	Site Management for	Gate, Labor and materials		\$200.00	LS										3	LS		3	LS	\$600
Growth Medium Placement and Revegetation of the Hosakawa Mill area are already included in the acreage estimate of the current, posted surety.																				\$0

TOTAL REVEGETATION DIRECT COSTS \$40,600